

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 05283723
PUBLICATION DATE : 29-10-93

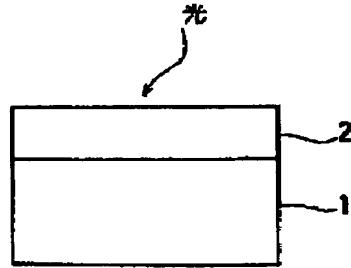
APPLICATION DATE : 02-04-92
APPLICATION NUMBER : 04110719

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INT.CL. : H01L 31/04

TITLE : PHOTOELECTRIC ELEMENT



ABSTRACT : PURPOSE: To obtain optimum photoelectric conversion efficiency by a method wherein an active layer consisting of P-type porous silicon, and an N-type amorphous silicon containing N-type amorphous silicon or microscopic crystal silicon, are P-N junctioned.

CONSTITUTION: A photovoltaic element consists of the P-N junction of a P-type porous silicon active layer 1 and an N-type amorphous silicon containing N-type amorphous silicon or microscopic crystal silicon. The preferable size of the microscopic hole of the P-type silicon 1 is several tens \AA to several hundreds \AA , and the preferable optical band gap of the porous silicon 1 is in the range of 1.4eV to 1.7eV. Also, the preferable film thickness of the N-type amorphous silicon 2, containing N-type amorphous silicon or microscopic crystal silicon, is 10 \AA to 200 \AA . The porous silicon is formed by treating a polysilicon thin film, which is formed on a glass substrate, in an HF solution using an anodic formation method.

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